

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of processing a schedule of a plurality of ~~workflow actions~~ sub-transactions within a parent transaction at a computer system, the method comprising:

initiating a ~~workflow action~~sub-transaction, from among the plurality of ~~workflow actions~~sub-transactions, into system memory of the computer system prior to occurrence of an external event on which the ~~workflow action~~ sub-transaction depends, the ~~workflow action~~ sub-transaction configured to idle until the external event occurs, the ~~workflow action~~ the sub-transaction including a latency attribute, the latency attribute representing an estimated wait time indicating how long the sub-transaction is expected to idle waiting for the external event to occur, the sub-transaction represented by transaction boundaries that indicate when the sub-transaction starts and ends within the parent transaction;

accessing a dynamically computed latency threshold, the dynamically computed latency threshold defining a maximum amount of time the computer system is to allow ~~a workflow action~~ the sub-transaction to remain idle in system memory waiting for an external event to occur, the dynamically computed latency threshold computed in accordance with a latency function based on one or more system performance characteristics of the computer system;

comparing the latency attribute to the latency threshold;

determining that the estimated wait time for the ~~workflow action~~ sub-transaction exceeds the maximum amount of time the computer system is to allow ~~a workflow action~~ the sub-transaction to remain idle in system memory waiting for an external event to occur based on the comparison;

in response to the determination, dehydrating the schedule to persist schedule state to non-volatile storage medium ~~freeing up the memory allocated to the schedule for use by other workflow actions~~, including:

recognizing the transaction boundaries of the sub-transaction;

suspending execution of the schedule;

~~selectively storing data associated with~~ persisting the schedule state in [[a]] the

non-volatile storage medium based on the latency comparison based on the transaction boundaries of the sub-transaction; and

selectively de-allocating system memory allocated to ~~schedule the sub-transaction~~ after suspending execution of the schedule to free up de-allocated system memory for use by other workflow actions.

2. (Currently Amended) The method of claim 1, further comprising establishing a proxy with the a naming service to associate[[d]] ~~with the persisted schedule state to create a corresponding association between the stored data and~~ with the occurrence of the external event.

Claims 3 and 4. (Cancelled).

5. (Currently Amended) The method of claim 2, further comprising:
detecting the occurrence of the external event subsequent to ~~selectively storing data associated with the persisting the schedule state;~~

reading the ~~selectively stored data~~ persisted schedule state out of the non-volatile storage medium in response to detecting the occurrence of the external event;

restoring the ~~selectively stored data~~ sub-transaction into system memory in response to detecting the occurrence of the external event; and

~~selectively resuming restoring~~ execution of the schedule-sub-transaction based on the external event and the transaction boundaries for the sub-transaction.

6. (Currently Amended) The method of claim 5, further comprising allocating system memory for execution of the schedule prior to restoring the ~~selectively stored~~ sub-transaction data into system memory.

7. (Previously Presented) The method of claim 1, wherein the latency attribute is an adjustable latency attribute according to a variable.

8. (Previously Presented) The method of claim 7, wherein the variable is related to the actual latency for completion of the workflow action.

9. (Original) The method of claim 1, wherein the data comprises schedule state information.

10. (Original) The method of claim 1, further comprising adjusting the latency threshold based on a variable.

Claims 11-52. (Cancelled).

53. (Currently Amended) A computer program product for use at a computer system, the computer program product for implementing a method of processing a schedule of a plurality of ~~workflow actions~~sub-transactions within a parent transaction, the computer program product comprising one or more computer storage media having stored thereon computer-executable instructions that, when executed at a processor, cause the computer system to perform the method, including the following:

initiate a ~~workflow action~~sub-transaction, from among the plurality of ~~workflow actions~~sub-transactions, into system memory of the computer system prior to occurrence of an external event on which the ~~workflow action~~ sub-transaction depends, the ~~workflow action~~ sub-transaction configured to idle until the external event occurs, the ~~workflow action~~ the sub-transaction including a latency attribute, the latency attribute representing an estimated wait time indicating how long the sub-transaction is expected to idle waiting for the external event to occur, the sub-transaction represented by transaction boundaries that indicate when the sub-transaction starts and ends within the parent transaction;

access a dynamically computed latency threshold, the dynamically computed latency threshold defining a maximum amount of time the computer system is to allow a ~~workflow action~~the sub-transaction to remain idle in system memory waiting for an external event to occur, the dynamically computed latency threshold computed in accordance with a latency function based on one or more system performance characteristics of the computer system;

compare the latency attribute to the latency threshold;

determine that the estimated wait time for the ~~workflow action~~ sub-transaction exceeds the maximum amount of time the computer system is to allow a ~~workflow action~~ the sub-transaction to remain idle in system memory waiting for an external event to occur based on the comparison;

in response to the determination, dehydrating the schedule to persist schedule state to non-volatile storage medium ~~freeing up the memory allocated to the schedule for use by other workflow actions~~, including:

recognizing the transaction boundaries of the sub-transaction;

suspending execution of the schedule;

~~selectively storing data associated with~~ persisting the schedule state in [[a]] the non-volatile storage medium based on the latency comparison based on the transaction

boundaries of the sub-transaction; and

selectively de-allocating system memory allocated to ~~schedule the sub-transaction~~
after suspending execution of the schedule to free up de-allocated system memory for use
by other workflow actions.

54. (Currently Amended) The computer program product of claim 53, further comprising computer-executable instructions that, when executed at a processor, cause the computer system to establish a proxy with the a naming service to associate[[d]] ~~with the persisted schedule state to create a corresponding association between the stored data and~~ with the occurrence of the external event..

55. (Currently Amended) The computer program product of claim 53, further comprising computer-executable instructions that, when executed at a processor, cause the computer system to:

detect the occurrence of the external event subsequent to ~~selectively storing data~~
~~associated with the~~ persisting the schedule state;

read the ~~selectively stored data~~ persisted schedule state out of the non-volatile
storage medium in response to detecting the occurrence of the external event;

restore the ~~selectively stored data~~ sub-transaction into system memory in response
to detecting the occurrence of the external event; and

~~selectively resuming~~ restore execution of the ~~schedule sub-transaction~~ based on
the external event and the transaction boundaries for the sub-transaction.

56. (Currently Amended) The computer program product of claim 55, further comprising computer-executable instructions that, when executed at a processor, cause the computer system to allocate system memory for execution of the schedule prior to restoring the ~~selectively stored~~ sub-transaction data into system memory.

57. (Previously Presented) The computer program product of claim 53, wherein the latency attribute is an adjustable latency attribute according to a variable.

58. (Previously Presented) The computer program product of claim 57, wherein the variable is related to the actual latency for completion of the workflow action.

59. (Previously Presented) The computer program product of claim 53, wherein the data comprises schedule state information.

60. (Previously Presented) The computer program product of claim 53, further comprising adjusting the latency threshold based on a variable.